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Nurturing intrapreneurship : a cross-cultural analysis of organizational climates

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NURTURING INTRAPRENEURSHIP: A CROSS-CULTURAL ANALYSIS OF ORGANIZATIONAL CLIMATES

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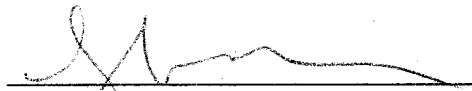

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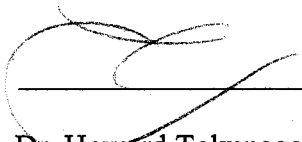

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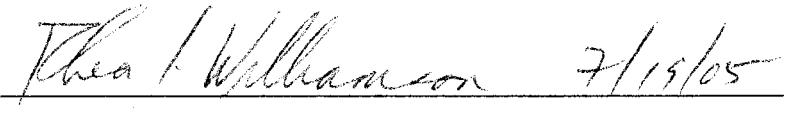

ABSTRACT

NURTURING INTRAPRENEURSHIP: A CROSS-CULTURAL ANALYSIS OF ORGANIZATIONAL CLIMATES

by Rangapriya Narasimhan

Results of a cross-cultural empirical investigation to assess the relationship between organizational climate for intrapreneurship and national culture values are presented. It was expected that national culture values would correlate with organizational practices and rewards that encourage an internal entrepreneurial spirit. The premise is that culture influences individuals' perceptions, attitudes, and behaviors. In addition, the extent to which countries and geo-social regions differed on elements of the climate for intrapreneurship variables was examined. This study was conducted in a multi-national organization with subsidiaries in 20 countries, of which 17 were included in this study. Significant correlations were found between national culture values and organizational climate for corporate entrepreneurship at the culture level of analysis. Also, there were significant differences between countries and geo-social regions on mean scores of the study variables constituting the climate for intrapreneurship. These findings have significant implications for organizational managers and researchers in corporate entrepreneurship.

Once an organization loses its spirit of pioneering and rests on its early work, its progress stops. -- Thomas J. Watson

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INTRODUCTION

Organizational culture and climate have been long acknowledged as critical factors for kindling and nurturing intrapreneurial (a.k.a., corporate entrepreneurial) spirit in organizations (Eggers, 1999; Hamel, 2000; Kuratko, Hornsby, Naffziger, & Montagno, 1993; Rule & Irwin, 1988; Sathe, 1988; 2003; Sykes & Block, 1989). Considerable research (e.g., Sathe, 1989) has been conducted on identifying elements in organizations' cultures that are conducive for growth of intrapreneurship in organizations. Moreover, there is substantial evidence that various aspects of a nation's culture impact the way organizations function, particularly with regards to profitability (e.g., Sethi & Elango, 1999). Another crucial aspect of an organization's functioning is its ability to reinvent and grow new businesses or to transform stagnant businesses that are currently in need of transformation (Schendel, 1990). This notion of reinvention or transformation is linked to intrapreneurship (Schendel).

In the present business environment, where multinational businesses are the norm, studying corporate entrepreneurship in a single national or cultural context (as is the case with most research studies) is remarkably inadequate. Previous research studies (e.g., van Muijen & Koopman, 1994) have shown that a nation's culture values influence an organization's culture. Similarly, based on Krieser, Marino, and Weaver (2002), Lumpkin and Dess (1996), and Miller's (1983) research, national culture affects a firm's intrapreneurial orientation, and subsequently influences individuals' firm-level entrepreneurial behaviors.

For this reason, organizations cannot assume a "one size fits all" approach to managing business units or organizations located outside the nation where headquarters is located, especially not with countries that uphold contrasting culture values. Moreover, if the culture values of any given nation are contradictory to the values of the organization at headquarters, the friction created by the contradiction might lead to undesirable results for the organization. It is therefore critical that managers of organizations understand how an organization's elements (e.g., practices, policies, procedures, and rewards; Schneider, 1975) that constitute a climate for intrapreneurship, differ across national cultures.

By comparing many nations (as will be done in the current study), as opposed to just two or three, management can understand why (based on national characteristics) countries might differ on climate for intrapreneurship variables. Although scholars have emphasized the importance of using data from multiple countries when studying corporate entrepreneurship (e.g., Zahra, Jennings, & Kurtatko, 1999), few research studies have empirically examined the effects of national culture on internal corporate entrepreneurship by using multiple countries (Hayton, George, & Zahra, 2002). Moreover, research studies focusing on international entrepreneurship have used small sample sizes at the individual-level of analysis and have relied primarily on sample sizes consisting of U.S. firms (Zahra & George, 2002).

In the present study, these limitations are overcome by using a sample size of about 16,000 individuals from subsidiaries of a multinational firm located in 17 countries. Characteristics of nations, especially their culture values, are used to explain how

elements of a corporate entrepreneurial climate within each of the subsidiaries of a multinational organization, differ across each of 17 countries.

Culture values, propounded by two leading scholars in the field of cross-cultural research, Geert Hofstede (2001) and Shalom Schwartz (1994; 1999), are used to explain these differences. These culture values include individualism and collectivism, power distance, uncertainty avoidance, masculinity and femininity (Hofstede), autonomy vs. conservatism, harmony vs. mastery, and hierarchy vs. egalitarianism (Schwartz). As determined by literature review, variables reflecting a climate for intrapreneurship include risk-taking, innovation, continuous improvement, organizational rewards and recognition, explicit goal setting, and feedback to employees (e.g., Baumol, 2004; Bessant, Caffyn, & Gallaghar, 2001; Carrier,1996; Hornsby, Naffziger, Kuratko, & Montagno, 1992; Kreiser et al. 2002; Kuratko et al., 1993; Morris, Avila, & Allen, 1993; Sathe 1988).

The relationship between culture values and climate for intrapreneurship variables will be evaluated at the country level-of-analysis. By studying this level of analysis, it will be possible to explain why- and to describe the likelihood by which- an organization, embedded within a given national culture, would endorse risk-taking and innovation, continuous improvement, organizational rewards and recognition, explicit goal setting, and feedback to employees. With this type of information, organizations that are venturing to open subsidiaries in any of these nations can assess how best to foster or to capitalize on a climate for intrapreneurship.

This study is based in part on the ecocultural framework for cross-cultural research developed by Berry (as cited in Georgas, van de Vijver, & Berry, 2004). The ecocultural model explains variations in the psychological characteristics at the individual or country level, within a framework consisting of specific ecological and social elements (Georgas et al., 2004). This model considers ecological and sociopolitical differences among countries and a set of cultural and biological adaptation variables, such as socialization and acculturation to explain the influences of ecocultural differences on psychological characteristics of individuals and countries. Based on this model, in this study it is asserted that culture values will relate with variables that reflect climate for corporate entrepreneurship and will explain variations between subsidiaries on the climate for corporate entrepreneurship variables.

Below, literature on corporate entrepreneurship and culture is reviewed. In these sections, key study variables will be defined and relationships among them will be proposed based on past research. Toward the end of the literature review, a summary will be presented, arguments in support of a relationship between culture values and climate for intrapreneurship will be forwarded, and hypotheses will be delineated.

LITERATURE REVIEW

There are two main themes of research in the field of intrapreneurship. The first theme focuses on individuals who implement innovations in firms. The second theme emphasizes on the corporate entrepreneurial process, looking specifically at factors required for the emergence and conditions required to sustain entrepreneurship (Carrier, 1996). Most research on climate for fostering intrapreneurship contributes to the second theme of research and analyzes organizational factors, including organizational climate, that are conducive to enabling employees of organizations to be intrapreneurs or entrepreneurs within the organization, unit, or work group.

Prior to delving into a review of literature on corporate entrepreneurship, it is important to define climate and differentiate it from culture. This distinction is important because in this study the elements of a nation's culture are addressed in relation to variables that reflect an organization's climate for intrapreneurship, and still there are some scholars who interchange the two concepts.

Culture versus Climate

Culture, whether the context is organizational or national, refers to patterns of fundamental assumptions, rooted in values, and contextual artifacts, that are shared by a group of people (Schein, 1990). Culture is reflected in shared patterns of beliefs, values, and expectations that produce norms that powerfully shape behaviors exhibited, thought processes, and feelings held by groups or individuals (Hofstede, 2001; Schwartz & Davis, 1981). Beliefs, values, norms, and patterns of expectations are shared because they are

shaped over the course of time and often influenced by environmental contingencies (Segall, Lonner, & Berry, 1998).

In contrast, climate is typically discussed in the context of organizations or groups. It is based on employees' perceptions of aspects of the work environment (Glisson & James, 2002). Climate, according to Schneider (1975), reflects practices, policies, procedures, and rewards of various aspects of organizational life (e.g., climate for safety or climate for service). Therefore, climate for intrapreneurship refers to the general feelings one has, at a given moment in time, about how the group or organization with which one is associated is supporting (through procedures, practices, policies, and rewards) intrapreneurial behaviors.

When focusing on the organizational context, in particular, it is often useful to think about the difference between climate and culture in terms of *what* happens in an organization (i.e., organizational climate) and *why* the "what" happens in an organization (i.e., organizational culture; Schneider, Gunnarson, & Niles-Jolly, 1994). Another way to look at these concepts is through the lens of time where organizational climate can be seen as a snapshot moment and culture is more enduring (Moran & Volkwein, 1992).

This study assesses how national scores on various culture values (i.e., the culture level of analysis) relate to the "snapshot" moment of entrepreneurial practices, policies, procedures, and reward processes of organizations within the context of nations. In other words, this research paper examines how culture relates to the climate for entrepreneurship. Although it is not understood which comes first, climate or culture, it is not the scope of this paper to make that determination. Instead, the purpose of this

paper is to determine how culture (in terms of culture values) relates to climate for intrapreneurship.

Intrapreneurship versus Entrepreneurship

> Intrapreneurship has been defined as the
>
> > development *within* [italics added] a large organization of internal markets and relatively small and independent units designed to create, internally test-market, and expand improved and/or innovative staff services, technologies or methods within the organization. This is different from the large organization entrepreneurship/venture units whose purpose is to develop profitable positions in external markets (Nielson, Peters, & Hisrich, 1985, p.181).

Intrapreneurs are defined as "any of the dreamers who do" (Pinchot, 1985, p. 9). These are people or organizational employees who are responsible for generating innovation of any kind within an organization and are instrumental in turning ideas into profitable realities (Pinchot, 1985).

Entrepreneurship Meanings

In contrast, entrepreneurship, in general, is a broad term that can refer to acts of creating, renewing, or innovating an organization either within or outside the context of an existing organization (Sharma & Chrisman, 1999). The terms "entrepreneurship" or "independent entrepreneurship" are typically used to define and describe entrepreneurial efforts of individuals operating outside the context of an existing organization. In contrast, entrepreneurial efforts within an existing organization have been known by a variety of terms, such as corporate entrepreneurship, corporate venturing, internal corporate entrepreneurship, internal entrepreneurship, renewal, and venturing (Sharma & Chrisman).

Corporate entrepreneurship has been defined as the aborning of new businesses within existing business and transformation of organizations through a renewal of new ideas (Guth & Ginsberg, 1990). It is an organizational process for transforming individual ideas into collective actions by managing uncertainties in the process (Chung & Gibbons, 1997) and refers to innovation that is initiated and implemented by employees within an organization (Carrier, 1996). von Hippel (1977) defines corporate venturing as an activity that aims at creating new businesses for the corporation through the development of external or internal corporate venture. Jones and Butler (1992) refer to internal corporate entrepreneurship as entrepreneurial behavior occurring within the context of one firm. Internal entrepreneurship has been defined as entrepreneurial activities carried out in an organization in a "formalized" manner or where explicit organizational support and resources have been committed for encouraging innovative corporate endeavors, such as new product developments or improvements or new processes and procedures (Schollhammer, 1982). Renewal has been defined as "revitalizing a company's business through innovation and changing competitive profile" (Zahra, 1995, p. 227). Venturing refers to the process by which existing firms create new business opportunities by expanding operations in existing or new markets (Zahra, 1996).

Common Themes Across Definitions

Despite differences in terminology, all of the above definitions have one underlying common theme referring to a single phenomenon, that is, all the above definitions refer to system-wide entrepreneurial activities undertaken within the context of an existing organization. These entrepreneurial efforts are organizational level efforts

(in contrast to individual level efforts) and have organizational support. The focus of this paper is to study the climate for entrepreneurship within the context of an existing organization or "internal- entrepreneurship." It is not a study of entrepreneurship outside the context of an existing organization or independent entrepreneurship. For this reason, in this paper, the term "intrapreneurship" will be interchanged with corporate entrepreneurship, corporate venturing, internal corporate entrepreneurship, internal entrepreneurship, renewal, and venturing.

Intrapreneurship. From the time of its inception through today, the idea of intrapreneurship has been a popular subject among organizational managers, because it is seen as beneficial to the organization's survival. Below are some reasons given for encouraging intrapreneurship in organizations.

1) To develop cost effective solution[s] to meet the challenges of global competition (Pryor & Shays, 1993).
2) To "tak[e] advantage of the in-house genius" (Adams, 1996, p. 56).
3) "To innovate ...to improve flexibility, competitiveness, and reactivity." (Carrier, 1996, p.5).
4) To avoid losing business to startups in economies, such as the US where venture capital is available in plenty in the global market place (Sathe, 1988).
5) To "exploit new market opportunities" (Eggers, 1999, p. 76).

Organizational managers, therefore, try to find ways to nurture intrapreneurship as a source of competitive advantage for the firms.

Establishing an organizational environment, specifically an *organizational climate* that encourages intrapreneurship, wherein each employee is encouraged to create new things, is of crucial importance and one of the key factors for fostering intrapreneurship (Eggers, 1999; Hamel, 2000; Sathe, 1988; 2003; Sykes & Block, 1989).

Organizational Culture versus Climate for Intrapreneurship

In this paper, the words climate and culture will not be interchanged, even though numerous scholars have used these terms as such. Whenever possible, the terms will be clarified in order to ensure they are not being used synonymously, as they are, in fact distinct (Schneider et al., 1994). Other scholars have taken a different route by distinguishing between "deep entrepreneurship" (which is supposed to reflect entrepreneurial culture) and "surface entrepreneurship" (which is supposed to reflect a climate for entrepreneurship; Sathe, 1988). "Deep entrepreneurship" is found in organizations where entrepreneurship is held as an important shared value by organizational members. This type of an entrepreneurship can be viewed as an enduring or long-term entrepreneurship, wherein management encourages corporate entrepreneurs not because it is a corporate mandate or a business necessity, but because entrepreneurship is a value that the management truly believes in. In contrast, "surface entrepreneurship" occurs when management of organizations encourages corporate entrepreneurs through various practices and reward systems. Thus, surface entrepreneurship reflects "climate for entrepreneurship," as it is for a short-term period in which an organization encourages internal entrepreneurship. To extrapolate, "surface entrepreneurship" is a short-term effort by organizations to encourage intrapreneurship,

which may cease as soon as there is no business necessity to encourage entrepreneurship within the organization. Therefore, the former concept is permanent, whereas the latter is transitory in nature. Although in both these cases organizations have environments that encourage entrepreneurship, based on the definitions of these concepts, it is clear that we are studying surface entrepreneurship.

Elements of an Organizational Climate for Intrapreneurship

Regardless of management's motivation for encouraging entrepreneurship or the type of entrepreneurship, organizations wishing to create an organizational environment conducive to intrapreneurship must necessarily encourage certain factors in its environment. Although numerous factors that encourage entrepreneurship within organizations have been identified in the literature search, some factors are emphasized repeatedly by researchers. These factors include encouraging innovation and risk-taking (e.g., Kreiser et al., 2002; Morris, et al., 1993) including continuous improvement (Baumol, 2004; Bessant et al., 2001), providing adequate rewards and recognition to employees (e.g., Carrier,1996; Hornsby et al.,1992; Sathe 1988), clarifying explicit goals and giving feedback (e.g., Kuratko et al., 1993). These are some of the critical factors in an organization's environment that must be perceived by the employees as being encouraged in the workplace. Employees' aggregated perceptions of the extent to which these elements are encouraged in the organization reflects organizational climate for intrapreneurship.

The focus of this research paper is climate for intrapreneurship, that is, the extent to which employees in organizations perceive their organization is encouraging concepts

related to internal entrepreneurship, namely risk-taking, innovation, continuous improvement, providing adequate rewards and recognition, providing explicit goals, and feedback. The following section describes existing research on the relationship between each of these individual factors and corporate entrepreneurship.

Innovation and Risk-taking. Previous researchers (e.g., Jones, Morris, & Rockmore, 1995; Kreiser et al., 2002; Morris et al., 1993; Morris, Davis, & Allen, 1994) have repeatedly argued that innovation and risk-taking are central to the concept of entrepreneurship. Entrepreneurial innovation at the organizational level refers to "willingness to introduce newness and novelty through experimentation and creative processes aimed at developing new products and services, including new processes" (Dess & Lumpkin, 2005, p. 148). Risk-taking at the organizational level refers to "making decisions and taking actions without knowledge of probable outcomes, some undertakings may also involve making substantial resource commitments in the process of venturing forward" (Dess & Lumpkin, p. 148). Covin and Slevin (1988) argued that an organization's entrepreneurial orientation was the summation of top management's proclivity to take business-related risks, in order to bring about change and innovation resulting in a competitive advantage for their firm in order to compete aggressively with other firms.

Innovation and risk-taking have been viewed as two critical dimensions of the entrepreneurial orientation scale. Existing research on each of these variables indicate that innovation has been constantly viewed as a fundamental endeavor of an entrepreneurial organization (Miller & Friesen, 1982; Schumpeter, 1934). Previous

research on innovation has shown that innovation is *the* common theme of corporate entrepreneurship (e.g., Covin & Miles, 1999). Zahra (1993) reiterates this view by stating that the hallmark of an entrepreneurial organization is its capability to create and introduce new products in the market. Entrepreneurial firms are known to exhibit higher levels of product-innovation than conservative firms (Miller & Friesen, 1982). Russell and Russell (1992) found a strong correlation between an organizational culture that supports innovation and successful entrepreneurial strategies.

Similarly, risk-taking has also been long associated with entrepreneurship (Kreiser et al., 2002). Previous research shows that entrepreneurial firms or firms in an entrepreneurial mode devise strategies that are characterized by "dramatic leaps forward in the face of uncertainty" (Mintzberg, 1973, p. 45). Khandwalla's study (as cited in Kreiser et al., 2002) found that entrepreneurial firms take more risks than other organizations.

In the early nineties, Covin and Slevin (1991) conceptualized a model in which corporate entrepreneurship was seen as the composite of certain behaviors, including top management risk-taking with regard to investment decisions and strategic actions in the face of uncertainty, frequency and the extent of product innovations and the firm's proclivity to compete aggressively with rivals in the industry. They termed these behavioral tendencies as entrepreneurial posture. Jones et al. (1995), in their study of human resource practices that encourage intrapreneurship, found that intrapreneurial firms evaluate innovations introduced by their employees during the performance evaluation or performance appraisal of employees. Moreover, these researchers also

found that intrapreneurial firms tend to have a higher tolerance for failure which in turn encourages risk-taking (e.g., Hornsby, Kuratko & Montagno, 1999; Hornsby, Kuratko, & Zahra, 2002; Kuratko & Hornsby, 1998; Mahmud, 2002). Intrapreneurial firms also evaluate employee performance over a longer period of time, which provides adequate opportunities for employees to take risks, which in turn supplements the corporate entrepreneurial process (Jones et al.). A more recent empirical inquiry by Kreiser et al. (2002) confirmed that innovation and risk-taking form two of three critical dimensions of entrepreneurial orientation, the third dimension being proactiveness.

Continuous Improvement. One component of an innovative organization is high-involvement innovation. The key feature of high-involvement innovation is participation by employees in organization-wide continuous improvement activities (Tidd, Bessant, & Pavitt, 1997). Continuous improvement is a type of innovation. In its verb form, continuous improvement refers to a process by which innovations continuously emerge from an organization (Bessant et al., 2001). In its noun form, continuous improvement refers to products of those innovations (Bessant et al.). It is "sustaining innovation" or a *type* of innovation that improves the performance of existing products or services (Christensen, 1997) and is an evolutionary and incremental process (McAdam, Stevenson, & Armstrong, 2000).

For example, Baumol (2004) describes the progress in computer chip manufacturing as an incremental innovation. Although the invention of an electronic computer was a revolutionary innovation, the improvement in the number of instructions that a computer chip processed by 3 million percent from 1973 to 2003 is the result of

incremental innovations over the three decades. Similarly, as of 2003, the number of transistors embedded in a single chip has increased by 10 million percent as compared to 1968. These are examples of incremental innovations over a course of three decades. It is important to note that because of its incremental quality, continuous improvements are far less disruptive than radical innovations and enable entrepreneurs to build on existing routines and skills (Elfring & Hulsink, 2003; Kirzner, 1997). The relationship between continuous improvement and innovation is that every innovation has to go through a continuous improvement process in order to be successful (Kanji, 1996; McAdam et al., 2000). When continuous improvement and innovation are integrated into an evolutionary process it will result in every innovation being turned into a successful one thereby leading to business excellence (Kanji, 1996; McAdam et al.). For example, in the case of Intel, the incremental innovation over three decades in the microprocessor chip resulted in better computing capacity for users, as compared to the initial breakthrough of the electronic computer with a primitive microprocessor chip (Baumol, 2004). For this reason, continuous improvement is as important as innovation for intrapreneurial firms.

As Baumol states, bureaucratic control typical of innovative activities in large firms leads to modest predictable and incremental innovations but these small improvements although seemingly insignificant lead to spectacular results in the long run, thereby leading to more growth than revolutionary prototype innovations. Therefore, although continuous improvement is a type of innovation and helps create successful innovations, it is a separate concept in itself and existence of an organizational climate for innovation does not necessarily imply the existence of an organizational climate for

continuous improvement or vice-versa. For example, previous researchers have stated that organizations foster slightly different environments for continuous improvements and innovation (McAdam, Armstrong, & Kelly, 1998).

Rewards and Recognition. Organizational rewards and recognition have been established as critical success factors for fostering internal entrepreneurship (Block & Ornati,1987; Hornsby et al. 2002; Sykes, 1992). Rewards and recognition serve a dual function in fostering internal corporate entrepreneurship. First, the use of appropriate rewards is expected to help middle managers assume the risks associated with intrapreneurial activity (Hornsby et al., 2002). Second, both intrinsic and extrinsic rewards are conducive to entrepreneurial motivation (Kuratko, Hornsby, & Naffziger, 1997). Jones et al. (1995), in identifying human resource (HR) practices that promote corporate entrepreneurship, have stated that rewards and recognition are crucial mechanisms for fostering corporate entrepreneurship because they reinforce desired entrepreneurial behaviors. Thus, appropriate reward and recognition systems promote internal entrepreneurship by motivating managers to create organizational environments that encourage intrapreneurial activity and at the same time motivates employees. Kuratko et al. (1993) have identified result based reward system, that is, "a reward system that encourages others to achieve and to [take] risk[s]" (p. 30), as a critical element in the intrapreneurial environment of established organizations.

Explicit Goals. The presence of explicit goals that are mutually agreed upon by the manager and worker in order to achieve specific steps is a critical element in the intrapreneurial climates of organizations (Kuratko et al., 1993). Farrow, Johnson, and

Larson (2000) noted that clear goal setting (for a virtual team), was one of the key success factors to yield quick innovations and competitive advantage. Organizations that foster corporate entrepreneurship tend to set performance objectives or goals based on shared participation or explicit understanding (Jennings & Lumpkin, 1989). Large organizations that would like to encourage the spirit of corporate entrepreneurship must set "stretch goals" or high and clear performance standards across the organization (Taylor, 2001). The importance of setting explicit goals comes to light in the case of a leading French manufacturing company that failed to nurture its internal venture. Lack of clarity between the manufacturing company and internal venture in discussions of business goals and strategies ultimately led to the closure of the internal venture (Badguerahanian & Abetti, 1995).

Feedback. A system of feedback and positive reinforcement has been emphasized as a critical factor in intrapreneurial climates of organizations (Hornsby et al., 2002; Kuratko et al., 1993). In the broader area of organizational studies, giving individuals feedback about past performance has been known to positively affect motivation and future performance levels (Earley, Northcraft, Lee, & Lituchy, 1990). With reference to entrepreneurship, individuals who received negative feedback about their entrepreneurial abilities demonstrated less effort in critiquing a business plan as compared to individuals who were provided positive feedback about their entrepreneurial abilities (Pieterman, Shaver & Gatewood, cited in Gatewood, Shaver, Powers, & Gartner, 2002). Gatewood et al. (2002) concluded that individuals receiving positive feedback had higher expectations of success in their future entrepreneurial ventures. Manipulation of feedback changed

expectancies of entrepreneurial success (Gatewood et al.) and therefore positive feedback could be used to create a climate for encouraging employees to be intrapreneurial. Jones et al. (1995), in identifying HR practices that promote entrepreneurship, stated that performance appraisal is critical for fostering corporate entrepreneurship because performance appraisals communicate expected performance levels.

Role of National Cultures

The factors described above as related to intrapreneurial organizational climate (i.e., innovation and risk-taking, continuous improvement, rewards and recognition, explicit goal setting and feedback) are likely to be related to national culture values. National cultural values regarding entrepreneurship or intrapreneurship influence the degree to which a society considers entrepreneurial or intrapreneurial behaviors as desirable (Hayton et al., 2002). Thus, it is expected that national culture values will influence organizational practices and rewards that encourage an internal entrepreneurial spirit. For example, nations that emphasize autonomy values (i.e., freedom of creative thinking; Schwartz, 1999) would reward behaviors reflective of innovation and risk-taking. Engaging in these behaviors would aid the development of corporate entrepreneurship, and thus support a climate for intrapreneurship. In contrast, nations that emphasize conservatism values (i.e., conformity to norms and maintaining the status quo; Schwartz, 1999) would be less likely to support a climate for corporate entrepreneurship (Hayton et al.). To further understand the expected relationships between culture values and corporate entrepreneurship, the culture values developed by Hofstede (2001) and Schwartz (1999) are reviewed below.

Culture Values: Describing National Cultures

National culture provides a basic framework for social interaction (Douglas & Dubois, 1977; Morris et al., 1994). These principles are also referred to by Schwartz (1994; 1999) as culture values. Culture values are guiding principles that nations endorse to guide people regarding what are appropriate behaviors in various situations within a nation. They reflect broad preferences for one state of affairs over others and opinions on how things should be (Hofstede, 2001). Therefore, values motivate various patterns for social interactions (see Schwartz, 1994; 1999). Both Hofstede (2001) and Schwartz (1999) characterized nations along culture values.

In this study, both Hofstede's (2001) culture values, as well as Schwartz's (1994; 1999) culture values will be examined, in relation to the climate for entrepreneurship-related variables. Although cross-cultural studies of entrepreneurship have utilized Hofstede's culture values to explain findings (e.g., Hayton et al., 2002), the data that are applied today for studying relationships among variables at the culture level of analysis are over 35 years old. Schwartz's (1994; 1999) culture values scores represent a more comprehensive, recent framework, developed *a priori* with a team of international scholars, and include the former Communist Block countries. Culture values proposed by both these scholars will be used to understand the relationship between culture values and organizational climate for intrapreneurship.

Hofstede's Culture Values. Hofstede (2001) classified over 40 countries from around the world into four dimensions of culture- related values, including "Power Distance," "Individualism-Collectivism," "Uncertainty Avoidance," and "Masculinity-

Femininity." Power distance refers to the degree of equality and inequality between people in a country's society. Countries that are high on power distance emphasize rigid distinctions in the social strata (e.g., caste system) and do not readily allow upward movement of its citizens. Examples of high power distance countries are India and China. In an organizational context, power distance refers to the degree of deference subordinates have for their superiors or for the organizational hierarchy. Countries scoring low on power distance emphasize equality for all its citizens. Examples of low power distance countries include United States and United Kingdom.

Individualism and Collectivism refer to the extent to which a society emphasizes individual choices and individual achievement versus collective achievement and interpersonal relationships (Hofstede, 2001). Cultures that emphasize individuals as distinct from the group are individualistic, whereas cultures that emphasize individuals as a integral part of the group are collectivistic (Hofstede). Examples of countries scoring high on individualism (or low on collectivism) include USA, Netherlands, and Australia. Countries scoring low on individualism (and high on collectivism) include China, Singapore, and Brazil.

Uncertainty Avoidance refers to the level of tolerance a society has for uncertainty and ambiguity. Countries that have a high tolerance for ambiguity would score low on uncertainty avoidance. Countries such as the United Kingdom and India, that have a low score on uncertainty avoidance, have higher tolerance for uncertainty and ambiguity, whereas Poland and Japan, scoring high on uncertainty avoidance, have a low tolerance for ambiguity.

Masculinity versus Femininity refers to the extent to which societies emphasize the traditional male role work model of achievement, control, and power versus interpersonal harmony. This dimension is not akin to the gender distinctions at the individual level of analysis (Hofstede, 2001). At the culture level of analysis, masculinity is defined as the extent to which a society or a culture clearly distinguishes between social gender roles, that is, between the traditional roles of men versus women (Hofstede, 1998). For example, men are expected to be assertive, tough, and ambitious and women are looked as being nurturing, modest and more concerned with quality of life (Hofstede, 1998). Societies that value masculinity draw up a clear distinction between the roles for men and for women and an overlap between these roles may be discouraged. For example, a woman who is assertive and ambitious, or a man who is nurturing and modest may not be appreciated in masculine societies. In contrast, societies that value femininity do not clearly distinguish between gender roles for men and women. In these societies gender roles overlap and therefore both men and women are supposed to be modest, tender and concerned with the quality of life (Hofstede, 1998). Countries scoring high on Masculinity include Mexico and Italy; countries scoring low on Masculinity (i.e., high on Femininity) include Brazil and Singapore.

Schwartz's Seven Culture Value Types. In a more recent study of culture values, Schwartz (1994; 1999) determined seven culture value types that can be collapsed into three culture values dimensions. The first of these culture values dimensions is autonomy vs. conservatism. This culture values dimension, like individualism vs. collectivism, addresses the relationship of the individual to the group. In autonomous cultures, like

individualistic cultures, individuals' interests take precedence over the group's interests. In conservatism cultures, like in collectivistic cultures, the group's interests takes precedence over the individual's interests and the individual is embedded in the group. Societies that consider individuals as independent and encourage them to express their preferences are labeled *autonomous* cultures.

Schwartz (1999) further classified autonomy values into *intellectual autonomy* and *affective autonomy.* Intellectual autonomy refers to a cultural emphasis on desirability of individuals pursuing their own intellectual directions. Affective autonomy refers to a cultural emphasis on desirability of individuals in pursuing emotionally positive experiences. Societies or nations that emphasize autonomy values include France and Netherlands. Conservative cultures, in contrast, have a marked cultural emphasis on maintenance of status quo and dissuade actions that disrupt the solidarity or group order. Nations that emphasize conservatism include Singapore and Poland.

A second dimension is hierarchy vs. egalitarianism (Schwartz, 1994; 1999). This culture value dimension is similar to Hofstede's (2001) power distance, as well as femininity. The dominant principle is how societies determine to encourage socially responsible behavior from its citizens. Societies that ensure this by legitimizing and relying on hierarchical social differences (as with power distance culture value, Hofstede; Schwartz, 1994) are labeled *hierarchical.* Examples of countries that actively emphasize values of hierarchy are China and India. Cultures that encourage its members to treat others as moral equals (as with low power distance and feminine cultures) emphasize

egalitarianism as a socially desirable value (Hofstede, 2001; Schwartz, 1994). Countries that emphasize egalitarianism include Italy and Netherlands.

A third and final culture values dimension is mastery vs. harmony (Schwartz, 1994; 1999). This culture value dimension is similar to masculinity vs. femininity (Hofstede, 2001; Schwartz, 1994). A prevailing issue that all societies try to resolve is the relationship between mankind, to the environment, and the social world. Societies that emphasize *harmony* as a cultural value encourage its citizens to fit harmoniously with the environment (as with Feminine cultures, Hofstede, Schwartz, 1994). Countries that encourage harmony values include Italy and Poland. Societies that encourage *mastery* as a cultural value emphasize getting ahead through self-assertion, encourage ambition and success, and encourage individuals to change the world to fit personal or group interests (as with Masculine cultures, Hofstede, Schwartz, 1994). Examples of countries that encourage mastery values are USA and Canada.

Research studies have shown that cultural values of a nation exert important influence on entrepreneurial behavior within a nation (e.g., Shane, 1992; 1993). In the next section a comprehensive examination of the potential relationship between national culture and intrapreneurship, is reported.

National Culture in Relation to Intrapreneurship

Most cross-cultural entrepreneurship research has focused on the relationship between national culture and aggregate measures of entrepreneurship (e.g., national rates of innovation, new firm formation rates) or on the relationship between national culture and individual entrepreneur's characteristics or traits (e.g., comparison of characteristics

between entrepreneurs and non-entrepreneurs; Hayton et al., 2002). A few of the studies that have studied corporate entrepreneurship in relation to national culture have examined entrepreneurial process issues (e.g. choice of entry mode, that is, organizations' preference to enter new markets via acquisitions, joint ventures, or direct investments; Hayton et al.). With the exception of Morris et al. (1994), none have looked specifically at organizational climate variables for fostering intrapreneurship; instead, they studied national culture in relation to aggregate measures of entrepreneurship, entrepreneurial traits and entrepreneurial processes. Also, except for Morris et al. none have examined climate for intrapreneurship in relation to multiple culture characteristics. This study is different from the above mentioned studies because these prior studies did not focus on organizational climate for intrapreneurship. Morris et al. found a curvilinear, inverted U shaped relationship between intrapreneurship and national cultural values of individualism and collectivism. Intrapreneurship declined with high levels of collectivism or individualism, whereas in countries with moderate levels of individualism or collectivism, intrapreneurship grew

Thus, it is conjectured that organizations in some countries will be more successful than organizations in others in fostering a climate for intrapreneurship that includes innovation and risk-taking, continuous improvement, provision of sufficient rewards and recognition of employees for their performance, explicit communication of goals, and feedback to employees. It is further surmised that countries that endorse cultural values opposing corporate entrepreneurship will hinder the process of establishing an organizational climate for intrapreneurship, whereas compatible cultural

values are expected to facilitate the process. For example, it is likely that a negative relationship between conservatism culture values and risk-taking will be found, but a positive relationship between autonomy culture values and risk-taking will be found.

In the following section different factors that comprise the organizational climate for intrapreneurship and how national culture is expected to relate to the levels of these factors in organizations are presented. Each subsection is followed by hypotheses.

Hypotheses

Innovation and Risk-taking, Continuous Improvement, and National Culture Values. Innovation and Risk-taking are expected to be encouraged in organizations situated in cultures that are high on individualism. The spirit of competition in individualistic societies and the openness of individualistic societies to experimentation are expected to encourage innovation and risk-taking among individuals and organizations (Herbig & Miller, 1992; Shane 1992; 1993). Similarly, intellectual autonomy in a society encourages individuals to pursue their own ideas and intellectual directions. In such societies curiosity, creativity, and broadmindedness (key terms conceptualizing intellectual autonomy) are valued (Schwartz, 1999). Conservatism values, however, emphasize maintenance of status quo and people in societies that value hierarchy are socialized and sanctioned to comply with rules attached to their roles (Schwartz, 1999). "Thinking outside the box" or challenging the existing way of doing things and creating something new may not be encouraged in conservative societies and in organizations in such societies. Therefore, it is expected that innovation and risk-

taking, will be encouraged in organizations where the national culture emphasizes values of individualism and intellectual autonomy. For this reason,

H_1: Innovation and risk-taking is expected to correlate negatively with conservatism culture values, but correlate positively with intellectual autonomy and individualism values.

Continuous improvement is expected to be encouraged in organizations where the national culture emphasizes values of conservatism, hierarchy, and intellectual autonomy. This is because although continuous improvement can be viewed as incremental innovation, the former happens when innovative activity is subjected to bureaucratic controls and hierarchy (Baumol, 2004). Therefore, continuous improvement is not as "free-spirited" as innovation. It is subject to organizational hierarchy and power distance, where supervisors or organizational mandates control the process.

Due to their incremental quality, continuous improvements are expected to be far less disruptive than radical innovation enabling entrepreneurs to build on existing routines and skills (Elfring & Hulsink, 2003; Kirzner, 1997). It is important to note here that conservatism and intellectual autonomy are opposing poles on the Schwartz's coplot (Schwartz, 1999). However, because continuous improvements are innovations (which in turn is related to intellectual autonomy) that are incremental in nature (which in turn is less radical than breakthrough innovations and therefore more conservative), continuous improvements are expected to be positively related with both conservatism and intellectual autonomy culture values.

Moreover, previous researchers (Shane, Venkataraman, & MacMillan, 1995) have

found that societies that are high on power distance prefer champions for improvement or innovation to have the buy-in and approval from the management regarding these improvements before these are implemented. Managers of employees in organizations that endorse continuous improvement and Total Quality Management (TQM) also encourage environments that inculcate loyalty and expect loyalty from their employees to their organization, supervisors, customers and team-mates (Luthans & Kessler, 1993). Loyalty, in turn, has been linked with power distance (Chew & Putti, 1995), that is, individuals who are high on power distance feel duty bound loyalty in their relationships (Clugston, Howell, & Dorfman, 2000). For this reason,

H_2: Continuous improvement is expected to correlate positively with intellectual autonomy, conservatism, power distance, and hierarchy cultural values.

Rewards and Recognition and National Culture Values. One of the aspects of cultures high on mastery values is that they value and encourage success and manipulation of one's environment. Management scholars have repeatedly emphasized rewarding and recognizing employees based on their performance in order to maintain performance levels (e.g., Galpin, 1994; Michlitsch, 2000). Organizations that have climates for intrapreneurship must have processes for rewarding individual initiatives and performance (Kuratko et al., 1993). Given that rewards are administered to those who have successfully utilized resources and mastered a piece of work through to successful completion, it is conceived that nations high on mastery culture values will encourage organizations to have reward systems that reinforce success as compared to countries that are low on mastery values.

H_3: Organizational Rewards and Recognition will be positively correlated with mastery culture values.

Explicit Goals and Feedback and National Culture Values. Providing explicit goals and feedback are two of the key elements for an organizational climate that emphasizes intrapreneurship (Carrier,1996; Kuratko et al., 1993). Setting explicit goals avoids confusion and uncertainty for employees regarding what is expected of them (Galpin, 1994). Regular feedback helps employees understand the situation in the organization and their performance and reduces ambiguity (Morrison, Chen, & Salgado, 2004). Cultures that have little tolerance for ambiguity are those that are high on uncertainty avoidance (Hofstede, 2001). Therefore, it is expected that

H_4: Setting explicit goals regarding business performance and individual performance will correlate positively with high uncertainty avoidance values.

H_5: Providing feedback to employees regarding individual and business performance and conditions will correlate positively with high uncertainty avoidance values.

Differences in Organizational Climate for Intrapreneurship and National Culture Values. Due to the differences in the national culture values of different countries and the expected relationship between these cultural values and levels of organizational elements of intrapreneurship, it is hypothesized that

H_6: There will be significant differences among the countries regarding these elements and in the overall organizational climate for corporate entrepreneurship. In other words, there will be significant differences between countries on mean scores

on elements comprising the organizational climate for intrapreneurship (i.e., innovation and risk-taking, continuous improvement, rewards and recognition, explicit goals, and feedback).

METHODS

Data for this study are archival. They were obtained by the thesis chair, Sharon Glazer, Ph.D., from an HR manager located at a multinational firm's headquarters in the mid-West. Description about the nearly 16,000 individuals, who responded to the organization-wide survey, and who make up the populations representing the various nations in this study are presented below. In addition, measures developed for this study and overall research design used to test the hypotheses are described.

Participants

Data were collected in 1999 through an organization wide climate survey of a multi-national company that had plants located in 20 countries. These countries include USA, Canada, Australia, UK, China, Japan, Singapore, India, Mexico, Brazil, Argentina, Netherlands, South Africa, France, Italy, Poland, Romania, Czech Republic, Spain, and Turkey. Data were gathered from 15,855 employees that constituted approximately 75% of the workforce. However, countries that had less than 10 respondents, that is Czech Republic, Spain and Turkey were not included for analyses in this study. This is because the anonymity clause on the survey stated that data would never be divided into any group with less than ten respondents. After cleaning the data for incomplete responses and insufficient sub-samples, the final sample size was 15,598. Of the available demographic information is occupational group. Respondents were classified into eight occupations, including Production Associates (48.2%), Skilled/Maintenance (15.7%), Clerical/ Secretarial (4.1%), Technician (4.3%), and Professional (10.5%), Supervisory/Operations coordinator (4.1%), Managerial (3.8%), and General Manager or

above (0.7%). In addition, 8.6% of the respondents did not report their occupation. Table 1 depicts the percent of respondents in each occupation in each country. Due to differing personnel laws in various countries, personal demographics such as age, tenure, and education levels were not obtained from the respondents. However, the HR manager at the company did indicate that probably about 75% of the employees worldwide were men.

Measures

For most items used in this study, the response scale was the same; 1 indicated *strongly agree* and 5 indicated *strongly disagree*. The sixth response choice was 'I don't know,' which was recoded as 'missing.' Responses were reverse coded so that 5 indicated 'strongly agree' and 1 indicated 'strongly disagree.' There were exceptions regarding the scores in two of the items and these have been noted when explaining the individual items in the following paragraphs.

Innovation and Risk-taking. Innovation and risk-taking was measured by the mean of participants' responses to four items. This construct was measured by asking participants to respond to items, including "I am encouraged to come up with new and better ways of doing things," "I am encouraged to take calculated risks to improve the company's effectiveness," "I am permitted to make the decisions that I feel are necessary to do my job effectively," and "If I share my ideas about new and better ways of doing things it is most likely to have...." The response scale to the last item was 1 'Positive effect on associates like me,' 2 'Little or no effect on associates like me,' or 3 'Negative effect on associates like me.'

Continuous Improvement. Continuous Improvement was measured by participants' responses to four items. The four items were "We are dedicated to improving continuously in things that matter," "I understand why continuous improvement is important to our business (e.g., growing profitably, meeting customer and shareholder expectations, outperforming the competition)," " The way my department operates is consistent with my unit's stated business plan and major continuous improvement objectives," and "Where I work management is willing to make reasonable investments to support continuous improvement."

Organizational Rewards and Recognition. Organizational rewards and recognition was measured by respondents' answers to three survey items. The survey items were "'When I do a good job, I usually receive appropriate recognition," "The better my performance, the better my total compensation will be," and "I benefit when the company improves its performance."

Explicit Goals. Explicit goal setting was measured by the mean of respondents' answers to five questions, "My organization's business plan and major continuous objectives have been clearly communicated to me," "It has been clearly communicated to me how my department contributes to the achievement of my Unit's business plan and major continuous improvement objectives," "My personal performance plan is directly tied to our business plan," and "The performance expectations for my job have been clearly communicated to me."

Feedback. Feedback was measured by employees' response to four items, "I receive useful feedback on how my unit is performing relative to its business plan and

major continuous improvement objectives," "It has been clearly communicated to me how my department is performing relative to its goals and objectives," "I am regularly involved in discussion of my department's progress and plan regarding continuous improvement," and " I receive effective feedback on how well I do my job."

National Culture Values. National Culture values were measured by cultural value indices and rankings published by Hofstede (2001) and provided by Schwartz (personal communication between Shalom Schwartz, Ph.D. and Sharon Glazer, Ph.D., October 2004). Hofstede's rankings were taken from published research, whereas Schwartz's values were obtained directly from Dr. Shalom Schwartz by the thesis chair, Dr. Sharon Glazer. Data were obtained for the explicit purpose of running analyses, but these numbers have not been published yet.

The national culture values used for this study include intellectual autonomy, affective autonomy, conservatism, mastery, harmony, hierarchy, egalitarianism (Schwartz, 1999), uncertainty avoidance, power distance, and individualism-collectivism (Hofstede, 2001).

Procedures

Survey items were developed by a team of external consultants. The survey was translated by a professional translation group into the native language in countries where English was not the prevailing language, with the exception of India. In India, in cases of employees who did not read English, the survey was translated verbally into Hindi (which is the native language of the region where the plant is located) by interpreters.

The other non-English language surveys were translated into French, Turkish, Mandarin, Romanian, Polish, Portuguese, and Italian.

Although the items were assessed by asking participants to respond to the survey, it should be noted that for hypotheses one to five between countries' scores on cultural values and the countries' scores on the organizational intrapreneurial climate elements are assessed. In order to maintain parity in the levels of analysis, comparisons to assess these constructs, which were stated in hypotheses 1 through 5, were made at country levels. The sample size for the study's first five hypotheses was 17 (countries) and not 15, 598 individuals. Participants' responses to each item were aggregated at the country level. For example, in the case of the United States the mean of the responses from 8,998 participants was determined to be the country's average response score to a given item. For testing hypothesis 6 analyses were conducted at the individual level of analysis. This is because differences between the mean scores of the countries were assessed as differences in employees' perceptions.

RESULTS

Reliability

Before testing hypotheses one through five, a reliability analysis to assess the internal consistency of the items on the scale was conducted at the country level of analysis by using Cronbach's alpha. For testing hypothesis 6, that is, examining differences in perceptions of between participants in countries, scale reliability analysis was conducted at the individual level of analysis. According to Nunnally (1978) a Cronbach's coefficient alpha that is greater than 0.70 is considered adequate. For scales having three items or less, the mean of the inter-item correlations is considered in lieu of alpha (Nunnally). A mean of inter-item correlation above .30 or higher is considered as acceptable (Nunally). For scales that had more than three items, that is, continuous improvement, feedback, explicit goals, and innovation and risk-taking, alphas were 0.80, 0.80, 0.77, and 0.83 respectively, at the country level. Rewards and recognition, measured by three items, had an inter-item correlation of 0.54, at the country level. Reliability analyses indicated that each of the scales used for this purpose had satisfactory reliability at the country level.

At the individual level of analysis continuous improvement, feedback, explicit goals, and innovation and risk-taking had good alpha reliability coefficients, 0.73, 0.82, 0.81, and 0.73, respectively. The mean inter-item correlation for the rewards and recognition scale was 0.50.

Testing Hypotheses

Means and standard deviations for each country are shown in Table 2. Pearson's correlations between the scale items and Cronbach alpha reliabilities are presented in Table 3. Hypotheses one through five were tested using Spearman's rank correlation coefficient. Spearman's rank correlation coefficient was an appropriate statistic to compare these variables because this correlation compares the ranking of a country's score on a particular criterion and the country's organizational climate ranking on a particular scale item. Table 4 presents results of the Spearman's rank correlation coefficient (Spearman's ρ) between country-level scores on the intrapreneurship climate variables and Hofstede's cultural values. Table 5 presents results of the Spearman's rank correlation coefficient (Spearman's ρ) between country-level scores on intrapreneurship climate variables and Schwartz's cultural values.

Based on Spearman Rho correlation coefficient, hypothesis 1, that Risk-taking and Innovation will correlate positively with intellectual autonomy and individualism culture values, but negatively with the conservatism culture values was partially supported. Risk-taking and Innovation positively correlated with intellectual autonomy (ρ =.52, $p < 0.05$). Hypothesis 2 was also partially supported. Continuous Improvement positively correlated with power distance (ρ =.53, p <0.05). Continuous Improvement also negatively correlated with individualism (ρ = -.50, p <0.05). However, the correlations between continuous improvement and hierarchy, conservatism, and intellectual autonomy were not significant.

Hypothesis 3 was fully supported. Rewards and Recognition positively correlated with Mastery value ($\rho = .51, p < 0.05$). Hypotheses 4 and 5 were not supported. Explicit goal setting as well as feedback did not correlate significantly with uncertainty avoidance.

Hypothesis 6 was tested using the one-way ANOVA procedures for testing the differences of means on continuous improvement, explicit goals, feedback, rewards and recognition and innovation and risk-taking. Due to differences in group sizes, homogeneity of variance was tested by using Levene's statistic. The results of the test indicated that the homogeneity of variance assumption was not met for all five organizational climate variables. Therefore, robust tests of equality of means (both Brown-Forsythe and Welch-James) tests were conducted instead of the F-statistic to test for the equality of means between the elements comprising the organizational climate for intrapreneurship. Results of both these tests indicated that Hypothesis 6 was fully supported at $p < 0.001$ (see Table 6) for both Brown-Forsythe and Welch-James statistic. There were significant differences between the countries on the elements comprising the organizational climate for intrapreneurship. *Post-hoc* tests (Dunnett's T3) were conducted to determine which of the countries were different from the others. Results of the *post-hoc* tests indicated that more than one country was different from the others (see Tables 7, 8 and 9).

For the sake of parsimony and in order to arrive at meaningful conclusions, countries were further collapsed into geo-social regions for conducting regional comparisons regarding differences in perception on organizational climate for

intrapreneurship variables. Geo-social regions were determined based on geographical and social similarities among countries in the analysis. The five regions were 1) Anglo countries consisting of USA, UK, Australia, and Canada, 2) East Asia consisting of China, Japan, Singapore, and India, 3) Eastern Europe consisting of Poland and Romania, 4) Latin America consisting of Mexico, Argentina, and Brazil, and 5) Western Europe consisting of France, Netherlands, Italy, and South Africa. South Africa was included in Western Europe because of the strong Dutch influence in this country.

Levene's statistic used to test for homogeneity of variances at the regional level indicated that the homogeneity of variance assumption was not met. Therefore, robust tests of equality of means (both Brown-Forsythe and Welch-James) tests were conducted to test for equality of means between elements comprising the organizational climate for intrapreneurship. Results of both these tests indicated that the regions were different from one another at $p < 0.001$ (see Table 10) for both Brown-Forsythe and Welch-James statistic. Further *post-hoc* tests (Dunnett's T3) were conducted to determine which of the regions differed from each other on climate variables for intrapreneurship (see Tables 11, 12, and 13).

Mean scores for innovation and risk-taking differed least between regions, in comparison to other intrapreneurial climate variables used in this study. The mean scores on innovation and risk-taking were significantly different between Anglo countries (M = 3.48) and East Asia (M = 3.63), Anglo countries and Western Europe (M = 3.66), and between Anglo countries and Eastern Europe (M = 3.70). There were also significant differences between Latin America (M = 3.53), and Eastern Europe with regards to this

variable. Mean scores on continuous improvement were significantly different between Anglo countries (M = 3.56), Eastern Europe (M = 4.07), and Western Europe (M = 3.69), as well as between these three regions and both East Asia (M = 3.91), and Latin America (M = 4.00). However, mean scores on continuous improvement were not significantly different between East Asia and Latin America (see Table 11).

With the exception of no significant differences between Western Europe (M = 2.95) and Anglo countries (M = 2.90), and between Western Europe and Eastern Europe (M = 3.01), the other geo-social regions were significantly different from one another with regards to rewards and recognition (see Table 12). Scores on explicit goals were significantly different across all regions (see Table 12) except between Latin America (M = 3.62) and Western Europe (M = 3.62). Mean scores on feedback were significantly different between all regions except between Anglo countries (M = 3.13) and Latin America (M = 3.25), as well as between East Asia (M = 3.52) and Eastern Europe (M = 3.57) (see Table 13). The East Asian regions differed significantly with respect to Latin America and Western Europe (M = 3.39), on the mean scores for feedback. Similarly, Eastern European regions differed significantly with Latin America and Western Europe on Feedback.

DISCUSSION

This study sought to examine the relationship between national culture values and intrapreneurial climate variables. Correlation analyses between culture values and intrapreneurial climate elements indicated that intellectual autonomy culture value positively correlated with intrapreneurial climate variable for risk-taking and innovation. Similarly, mastery values were related to rewards and recognition and the culture values of power distance and collectivism were related to the climate variable of continuous improvement. The present study also demonstrated that there were significant differences between countries and geo-social regions on the organizational climate for intrapreneurship.

Relationship between Intrapreneurship Climate Variables and Nations' Culture Values

Innovation and Risk-taking. This study showed that cultures that support creative thinking also endorse risk-taking and innovation. Jassawalla and Shashittal (2002) similarly found that an organization's culture can act as a powerful frame of reference for thinking and actions in times of uncertainty and ambiguity and highly innovation-supportive cultures help facilitate the process. Extending this logic to national culture values, national cultures that value intellectual autonomy might provide a frame of reference for organizations to encourage innovation and risk-taking.

Contrary to hypothesis, risk-taking and innovation were not correlated with individualism culture value. This might be because formal organizations have a universal tendency to socialize employees to feel and behave in ways that support the organization (Morris et al., 1994) and the individualistic attitude of the society might not influence an

organization to endorse individualism. It might also be because Hofstede's rank ordering of countries on individualism based on data collected between 1967-1973 are no longer reflective of the culture 35 years later.

Continuous Improvement. Next, continuous improvement and power distance correlated positively, but no significant correlation was found between continuous improvement and both hierarchy and intellectual autonomy values. Nonetheless, a negative correlation was found between continuous improvement and individualism and a positive relationship was found between continuous improvement and collectivism. That cultures valuing power distance and cultures valuing collectivism also endorse continuous improvement might be rooted in supervisors' expectations that their subordinates fulfill the organization's goals. This is because not helping the group fulfill the goals might cause one to disappoint others and disrupt the functioning of the group as a whole.

The concept of vertical collectivism becomes relevant to further explain this phenomenon. Vertical collectivism refers the endorsement of people working for the betterment of the group while also maintaining social status differentials (Triandis & Gelfand, 1998). The opposite of verticalism is horizontalism that emphasizes equality (Triandis & Gelfand). In organizations where vertical collectivism is encouraged people do not have either freedom or equality (Gelfand & Holcombe, 1998). As a result of this, continuous improvement occurs when supervisors provide a mandate to their subordinates to make continuous improvements and the subordinates willingly subject themselves to the authority in order to help their group and organizations succeed.

Moreover, previous researchers (e.g., Abraham, 1997) have also found that vertical collectivism is positively related to organizational commitment (Abraham), and that vertical collecitivists are likely to provide suggestions for the improvement of the organization (Smith, Organ & Near, as cited in Abraham). Therefore, vertical collectivists might go beyond what is required of their work roles to suggest improvements and give in their best to help the organization and their group to meet the goals of continuous improvement.

Rewards and Recognition. That mastery values positively correlated with organizational rewards and recognition might be due to a principle of acknowledging and rewarding people's achievements, and strivings for success and ambition. In our sample, countries that scored highest on mastery values were China and India. The recent trends in management literature also corroborate that Asian companies are emphasizing more performance based reward systems, especially team performance, as compared to North American companies (Finer, 2002).

Comparison of Geo-Social Regions on Study Variables

As hypothesized, there were significant differences between the countries on mean scores for intrapreneurial climate elements. However, to try and make sense of these differences, countries were grouped into geo-social regions. The following section discusses the results of the *post-hoc* tests on the climate for intrapreneurship variables between the regions.

It is apparent that people in different regions would rate certain intrapreneurial climate elements higher or lower than people in other regions. Culture values are likely

to guide people's responses to the intrapreneurial climate variables. However, in close examination of the five regions on intellectual autonomy it is difficult to explain the positive correlation between intellectual autonomy and innovation and risk-taking. East Asia and Eastern Europe have the lowest intellectual autonomy scores and Western Europe has the highest scores on intellectual autonomy. Latin America and Anglo countries scored neither high nor low on intellectual autonomy. However, an examination of the mean scores of countries on innovation and risk-taking indicate that Eastern Europe scored the highest on innovation and risk-taking, followed by Western Europe and East Asia. Latin America and Anglo countries scored lowest on innovation and risk-taking. That is, countries that have the highest and lowest scores on intellectual autonomy have higher mean scores on innovation and risk-taking as compared to countries that score moderately on intellectual autonomy.

That countries scoring high on intellectual autonomy would also have higher mean scores on innovation and risk- taking was expected. However, countries scoring low on intellectual autonomy would have higher mean scores (as compared to other countries) on innovation and risk-taking was not expected. Perhaps the best explanation for this result is that countries that are very low on intellectual autonomy, such as East European or East Asian countries, do not encourage individuals to be innovative. It is therefore possible that when individuals find the slightest encouragement from their organization to be innovative or to take risks they perceive their organization to be encouraging innovation and risk-taking behavior. They might, therefore, rate the organizational climate for innovation and risk-taking to be high, only because they are

denied these opportunities outside the organizational context. Hofstede (2001) has written that sometimes people indicate that something occurs because it is desired. In contrast, individuals from countries that value intellectual autonomy to a moderate extent have opportunities to take risks and innovate outside the organizational context. Therefore, even if the organizational practices regarding innovation and risk-taking are exactly the same (as in case of low intellectual autonomy value countries), individuals in countries with moderate intellectual autonomy might perceive that their organization does not sufficiently promote innovation and risk-taking. This could be one of the reasons why countries with moderate intellectual autonomy values scored lower on innovation and risk-taking as compared to countries with low intellectual autonomy values.

Eastern Europe, Latin America, and East Asia had the highest mean scores on continuous improvement. Western Europe and Anglo countries scored the lowest on this variable. This is consistent with the findings of the correlation analysis. National culture values of power distance and collectivism were positively correlated with intrapreneurial climate variable of continuous improvement. Eastern Europe, Latin America and East Asia, geo-social regions that scored highest on continuous improvement, were also higher on power distance and collectivism. Similarly, Western Europe and Anglo countries scored low on continuous improvement, as well as on power distance and collectivism, as compared to the other three geo-social regions.

The relationship between mastery values and organizational rewards and recognition were consistent with the correlation analysis, except in the case of Anglo countries. Results of the correlation analyses indicated that mastery values were

significantly correlated with organizational rewards and recognition. As expected, East Asian countries, which were the highest on Mastery values, also had the highest mean score on rewards and recognition. Similarly, both Latin America and Eastern Europe were higher on Mastery values as compared to Western Europe. Both these regions (Latin America and Eastern Europe) had higher mean scores on rewards and recognition as compared to Western Europe. However, Anglo countries, that were relatively high on Mastery values, had the lowest mean scores on organizational rewards and recognition. One possible explanation for this might be that mastery values, which are a part of Anglo countries' national culture, might cause rewards and recognition programs to be embedded into organizational practices. This might in turn result in people's standards for rewards and recognition in Anglo countries to be higher than in other countries. Alternatively, perhaps, managers of organizations in Anglo countries expect their employees to be successful intrapreneurs as a basic job requirement and might not provide any special rewards or incentives to encourage intrapreneurial behaviors among their employees. As a result of these practices, employees from Anglo countries might not perceive their organization rewards and recognition systems to be satisfactory and therefore rate it as being low. The definitive reasons for Anglo countries scoring lowest on rewards and recognition are not clear and require further investigation by future researchers.

Implications, Limitations, and Future Research

Practical Implications. This study has interesting practical implications for managers of organizations who wish to encourage a climate for intrapreneurship within

their organizations and for researchers. This study highlights that certain elements of intrapreneurship are correlated with culture values, whereas other elements are either not related to culture values or probably have been well-established into the corporate culture. By knowing which entrepreneurial climate elements significantly correlate with culture values, it becomes possible for management to emphasize those elements that continue to support an intrapreneurial climate to their advantage to encourage the spirit of corporate entrepreneurship within organizations. In this study, the elements that significantly correlated with culture values were innovation and risk-taking, continuous improvement, and rewards and recognition.

Understanding the relationship between culture values and entrepreneurial climate elements within organizations serves as a "SWOT" analysis by providing a backdrop for change efforts, especially when organizations venture into uncharted national cultures. Understanding national culture values also help managers to optimize their efforts by determining what areas need gentle stroking and what areas need further understanding of constraints on the internal entrepreneurial climate. For example, if an organization decides to implement rewards and recognition programs based on individual performance with regards to entrepreneurial efforts, these may be well received in mastery cultures, but less regarded in cultures that do not have a strong emphasis on mastery values. Therefore, organizations might choose to either capitalize on other successful entrepreneurial elements in the low mastery cultures or they might decide to influence the nation's culture to be more driven toward mastery by instilling reward structures that are expected to shape performance.

Theoretical Implications. This study also has interesting implications for researchers. Results of this study showed that nations' culture values are related to organizational climate for intrapreneurship. Thus it is suggested that culture does influence climate. In other words, values endorsed by a country will play a role in how individuals within that culture perceive practices, policies, procedures and reward mechanisms enacted.

Limitations. Despite the strengths of this study, including multiple nations represented in a single multinational company, there are also several limitations. One of the main limitations of the study is the uneven, and possibly inadequate, within country sample size. The largest sample size (United States) included over 8,000 respondents and the smallest sample size (Argentina) retained for this study had only ten respondents. Although greater than 15,000 employees completed the survey, at the country level of analysis, our sample size was seventeen.

This study also had a similar limitation to that of Hofstede's (2001), namely the indices for this study were based on responses of employees from one organization, at one time, who completed a survey that had different intentions (i.e., to assess overall climate and alignment of the organization) than what this study examined. Unlike Hofstede's sample that included managers, respondents to this study were predominantly male production workers.

Another limitation of this study is that we utilized measures of culture values that are available in the field of cross-cultural research. It might be possible that these cultural values may not be most important to understanding corporate entrepreneurial

dimensions (Busenitz, Gomez, & Spencer, 2000). Moreover, Hofstede's indices are over three decades old and country scores on these indices may have changed over this period of time.

This study has tried to overcome a part of this limitation by using Schwartz's (1994; 1999) culture values that are more recent. Another advantage of using Schwartz's indices for the purposes of this study was that Schwartz's indices had culture value scores for all countries in the data set, including the former Communist Block countries (e.g., Romania). In contrast, one of the major limitations of Hofstede's study was that it had omitted the Communist Block countries (Smith & Bond, 1998). Moreover, using Schwartz's indices in combination with Hofstede's indices, instead of relying solely on one or the other of these indices, provided a comprehensive perspective on the culture values of nations.

Also, although some of the important and recurring corporate entrepreneurship climate variables were examined in this study, other climate for entrepreneurship variables, such as proactiveness and management support for intrapreneurship, were not available in the dataset. Moreover, because the climate variables used in the current study were perceptions of employees, it is possible that the perceptions of employees might not be reflective of actual behaviors of organizational members although it is expected that perceptions influence actual behaviors (Lindell & Whitney, 2001).

The final limitation of this study is inherent in most cross-cultural research, that is, the variables that would explain cultural differences might not be reflective of these culture values, but some other cultural aspects that are only now being studied cross-

culturally (e.g., social axioms endorsed by cultures; Bond, Leung, Au, Tong & Chemonges-Nielson, 2004) or have not yet been discovered.

Future Research. Future research should attempt to replicate this study in other and multiple organizations and industries in order to determine if culture values consistently correlate with the corporate entrepreneurship climate variables or if results from this study were a special case. Moreover, more countries should be included in such studies. One of the major issues with doing research on organizational level variables is that the sample size is not only determined by the number of respondents, but also the number of organizations participating in the research. In the case of cross-cultural research this relationship is even further complicated by the difficulties in obtaining organizations with comparable samples from different countries. However, research studies that are successful in obtaining a large sample size for analyzing this relationship will be invaluable to this field.

Also, future research should assess other elements related to a climate for corporate entrepreneurship that might be instrumental in fostering the intrapreneurial climate within organizations, for example, management support for corporate entrepreneurship, availability of resources and a supportive organizational structure for intrapreneurship (Kuratko & Hornsby, 1998). These intrapreneurial climate variables should be linked to various objective and subjective outcomes, such as the number of new ventures created within the organization within a given time period, or the extent to which employees feel that they need to be an intrapreneur in order to be successful in the organization.

Future studies should consider other culture characteristics of nations such as tightness and looseness, activeness or passiveness, (Triandis, 2002), may be relevant in determining the climate for corporate entrepreneurship. For example, looseness of cultures (as opposed to tightness of cultures) might be related to certain intrapreneurial climate variables, such as innovation (Chan, Gelfand, Triandis, & Tzeng, 1996). This is because loose national cultures express norms in an ambiguous manner and do not have regimentation or discipline (Chan et al., 1996). Such cultures are tolerant of behavior that does not conform to existing norms. In contrast, tight cultures have clearly defined norms, follow strict regimentation, and discipline and severe sanctions are imposed on individuals who do not conform to the norms (Chan et al.). Therefore, loose cultures might encourage organizational members to innovate and take risks, which in turn, encourages a corporate entrepreneurial climate. Tight cultures might prohibit new ideas from developing and expect organizational members to conform to existing patterns thereby stifling intrapreneurial behavior. Similarly, a nation's openness to entrepreneurship might also influence climate for corporate entrepreneurship and this could have interesting implications for researchers in the field of corporate entrepreneurship.

Apart from culture characteristics, supranational culture levels, such as regional, ethnic, religious, and linguistic levels might also influence workplace behavior through national, organizational and professional culture levels (Karahanna, Evaristo, & Srite, 2005). It is possible that supranational culture elements in conjunction with national culture values and culture characteristics have a combined influence on the organizational

climate for entrepreneurship. It is essential to understand not only the influence of national culture on climate for intrapreneurship, but the combined influence of all culture levels, that is, supranational culture, national culture, professional, and organizational culture on the climate for intrapreneurship.

This study also showed that more than one national culture value had an influence on a specific element constituting the climate for corporate entrepreneurship. For example, both power distance and collectivism were each correlated with continuous improvement. Therefore, understanding the additive effects of the national culture values on the climate for corporate entrepreneurship may indicate why countries scoring similarly on certain culture values have significant differences in their mean scores on elements constituting the climate for corporate entrepreneurship. For example although both China and Singapore scored similarly on the culture value of collectivism, China scored higher on continuous improvement as compared to Singapore. This may be because China also scored higher on power distance as compared to Singapore, which might explain some differences in scores on continuous improvement. Thus, understanding the additive effects of culture values might provide a clearer picture regarding the influence of national culture on climate for corporate entrepreneurship.

Finally, future studies should focus upon determining how the elements of corporate entrepreneurship can be effectively fostered by organizations in different countries. For example how should innovation and risk-taking be encouraged in organizations in USA? How should continuous improvement be encouraged in organizations situated in China? Identifying effective practices for encouraging

intrapreneurial climate factors like innovation and risk-taking might hold the key to fostering innovative and risk-taking behavior among organizational employees.

Conclusion

In this study, intrapreneurship was studied in a cross-cultural context. This study demonstrated that cultural values are indeed significantly correlated with intrapreneurial climate elements. Power distance and collectivism was positively correlated with continuous improvement. Mastery values positively correlated with rewards and recognition. Intellectual autonomy was positively correlated with innovation and risk-taking. The findings of this study clearly demonstrate that nations' culture values relate with aspects of an organization's (embedded within a country) practices, policies, procedures, and reward systems. Organizations planning to open subsidiaries in different nations with diverse culture values can leverage critical information provided by this study to capitalize on nations' culture values to effectively nurture corporate entrepreneurship within the organization.

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Appendix A: Tables

Table 1

Percent of Employees Within a Given Occupational Category for Each Country

		Occupations							
		Plant Operatives				Staff Management			
Country	*n*	Production	Maintenance	Clerical	Technical	Professional	Supervisor	Manager	General Manager
AR*	10	10.0	10.0	40.0	0	10.0	10.0	10.0	0
AU	50	26.9	5.8	26.9	1.9	19.2	1.9	9.6	3.8
BR	318	57.1	8.6	11.1	9.3	1.9	6.8	2.2	1.2
CA	312	55.4	14.9	4.8	1.5	6.5	5.7	3.6	0.6
CH	131	64.3	15.7	2.7	1.0	2.6	1.0	2.2	0
FR	805	60.4	7.8	5.8	7.4	6.3	4.3	3.6	0.5
IN	391	38.7	6.9	2.0	3.0	15.6	5.3	5.5	2.2
IT	99	51.3	14.2	0.9	8.0	8.0	1.8	3.5	0
JA	18	0	0	33.3	0	44.4	0	16.7	5.6

Table 1 (continued)

		Occupations							
		Plant Operatives		Staff Management					
Country	*n*	Production	Maintenance	Clerical	Technical	Professional	Supervisor	Manager	General Manager
MX	8	12.5	6.3	12.5	0	12.5	0	6.3	0
NE	23	43.5	26.1	0	4.3	17.4	4.3	4.3	0
PO	434	6.5	57.7	1.7	1.9	6.1	5.0	4.0	0.2
RO	844	35.3	24.7	6.8	5.7	9.8	6.5	4.2	0
SI	68	76.5	0	2.9	4.4	11.8	1.5	2.9	0
So. Af	147	39.3	11.0	14.7	0	7.4	9.8	5.5	2.5
UK	1,302	45.6	17.0	4.4	3.1	9.1	6.2	2.9	0.3
USA	8,320	49.2	13.9	3.4	4.7	12.7	3.6	4.0	0.9

Note. * AR = Argentina , AU = Australia, BR = Brazil, CA = Canada, CH = China, FR = France, IN = India, IT = Italy, JA = Japan, MX = Mexico, NE = Netherlands, PO = Poland, RO = Romania, SI = Singapore, So. Af = South Africa, UK = United Kingdom, US =United States.

Table 2
Means and Standard Deviations of Scale Items

Countries	*n*	Innovation & Risk-taking		Continuous Improvement		Rewards and Recognition		Explicit Goals		Feedback	
		Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
AR*	10	3.43	.77	4.01	.44	3.17	.96	3.48	.84	3.18	1.03
AU	52	3.76	.72	3.89	.54	3.12	.90	3.75	.70	3.65	.74
BR	323	3.52	.78	3.99	.55	3.17	.90	3.62	.85	3.25	.86
CA	336	3.60	.70	3.60	.80	3.07	1.06	3.62	.87	3.20	.96
CH	1,151	3.71	.75	4.04	.69	3.46	1.07	3.95	.74	3.65	.82
FR	829	3.68	.71	3.66	.65	2.90	.92	3.68	.73	3.42	.76
IN	491	3.44	.79	3.60	.83	3.25	.95	3.46	.89	3.23	.89
IT	104	3.55	.78	3.78	.66	3.17	1.03	3.37	.93	3.22	.89
JA	18	4.02	.51	3.85	.64	3.76	.71	3.82	.77	3.63	.80
MX	16	3.69	.98	4.04	.62	3.32	.71	3.83	.71	3.39	.75

Table 2 (continued)

Countries	*n*	Innovation & Risk-taking		Continuous Improvement		Rewards & Recognition		Explicit Goals		Feedback	
		Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
NE	23	4.07	.48	4.09	.36	3.90	.44	4.01	.51	3.85	.62
PO	516	3.66	.68	4.02	.59	2.66	.90	3.94	.70	3.58	.78
RO	851	3.73	.77	4.14	.61	3.22	1.07	3.90	.77	3.56	.86
SI	68	3.53	.68	3.86	.60	3.25	.97	3.52	.78	3.34	.82
So. Af	162	3.54	.76	3.76	.65	2.97	.65	3.44	.88	3.26	.90
UK	1,462	3.46	.66	3.52	.69	2.78	.93	3.26	.83	2.97	.88
USA	8,962	3.48	.74	3.57	.78	2.92	.99	3.53	.83	3.15	.92

Note. * AR = Argentina , AU = Australia, BR = Brazil, CA = Canada, CH = China, FR = France, IN = India, IT = Italy, JA = Japan, MX = Mexico, NE = Netherlands, PO = Poland, RO = Romania, SI = Singapore, So. Af = South Africa, UK = United Kingdom, US =United States.

Table 3

Intercorrelations and Alpha Reliability of Study Variables (n = 17)

Variables	1	2	3	4	5
1. Innovation and Risk-taking	**.83**				
2. Continuous Improvement	.45	**.80**			
3. Rewards & Recognition	.67**	.45	**.54**$^{\Phi}$		
4. Explicit Goals	.76**	.76**	.46	**.77**	
5. Feedback	.83**	.71**	.62**	.89**	**.80**

Note. Alpha Reliabilities are bolded on diagonal.

**p<0.01

Φ Average of inter-item correlations in lieu of Alpha.

Table 4

Spearman Rho Correlations of Climate Variables and Hofstede's Values, (n = 17)

Variables	IR	CI	RR	EG	FDBK
Power Distance	.09	.53*	.40	.36	.34
Individualism/Collectivism	.08	-.50*	-.39	-.21	-.24
Uncertainty Avoidance	.38	.31	-.12	.31	.20
Masculinity-Femininity	.12	-.05	.17	.00	0.28

Note. IR = Innovation and Risk-taking; CI = Continuous Improvement; RR = Rewards & Recognition; FDBK = Feedback; EG = Explicit Goals

*p < .05

Table 5

Spearman Rho Correlations of Climate Variables and Schwartz's Values (n = 17)

Variables	IR	CI	RR	EG	FDBK
Intellectual Autonomy	.52**	.04	.04	.23	.12
Affective Autonomy	.20	-.40	-.24	-.07	-.14
Conservatism	.-.25	.22	.02	.01	.10
Hierarchy	-.20	-.17	.07	-.04	.12
Egalitarianism	-.05	-.23	-.27	.-28	-.35
Mastery	-.08	.19	.51*	.17	-.01
Harmony	.28	.13	.22	.07	.20

Note. IR = Innovation and Risk-taking; CI = Continuous Improvement; RR = Rewards & Recognition; FDBK = Feedback; EG = Explicit Goals

*p < .05

** p < .01

Table 6

Robust Test of Equality of Means to Test Differences in Organizational Climate Variables at Country Level of Analysis (n = 17)

Variables	Name of Test	Test Statistic	*df*1	*df*2
Innovation and Risk-taking	Welch- James	18.25	16	279.55
	Brown- Forsythe	17.72	16	577.29
Continuous Improvement	Welch- James	86.78	16	280.39
	Brown- Forsythe	94.81	16	1205.07
Rewards & Recognition	Welch- James	39.70	16	279.68
	Brown- Forsythe	42.09	16	928.07
Explicit Goals	Welch- James	54.66	16	279.37
	Brown- Forsythe	53.77	16	814.53
Feedback	Welch- James	50.84	16	279.52
	Brown- Forsythe	51.97	16	627.35

Table 7

Differences between countries on Innovation and Risk- Taking (indicated with X on the bottom of the diagonal) and Continuous Improvement (indicated with ◇ on top of the diagonal).

Countries		M_{IR}[a]	M_{CI}[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	AR*	**3.43 (.77)**	**4.01 (.44)**	-																
2	AU	**3.71 (.75)**	**3.89 (.54)**		-														◇	◇
3	BR	**3.52 (.78)**	**3.99 (.55)**			-	◇		◇	◇						◇		◇	◇	◇
4	CA	**3.60 (.70)**	**3.60 (.80)**				-	◇						◇	◇	◇				
5	CH	**3.71 (.75)**	**4.04 (.69)**			**X**		-	◇	◇	◇							◇	◇	◇
6	FR	**3.68 (.71)**	**3.66 (.65)**						-					◇		◇			◇	◇
7	IN	**3.44 (.79)**	**3.60 (.83)**					**X**	**X**	-				◇	◇	◇				
8	IT	**3.55 (.78)**	**3.78 (.66)**								-					◇			◇	
9	JA	**4.02 (.51)**	**3.85 (.64)**							**X**		-								
10	MX	**3.69 (.98)**	**4.04 (.62)**										-							

Table 7 (continued)

Countries		M_{IR}[a]	M_{CI}[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
11	NE	**4.07 (.48)**	**4.09 (.36)**			X	X			X	X			-					◇	◇
12	PO	**3.66 (.68)**	**4.02 (.59)**							X					-	◇		◇	◇	◇
13	RO	**3.73 (.77)**	**4.14 (.61)**			X				X						-	◇	◇	◇	◇
14	SI	**3.53 (.68)**	**3.86 (.60)**											X			-		◇	◇
15	So. Af.	**3.54 (.76)**	**3.76 (.65)**											X				-	◇	◇
16	UK	**3.46 (.66)**	**3.52 (.69)**					X	X			X		X	X	X			-	
17	US	**3.48 (.74)**	**3.57 (.78)**					X	X			X		X	X	X				-

Note. * AR = Argentina, AU = Australia, BR = Brazil, CA = Canada, CH = China, FR = France, IN = India, IT = Italy, JA = Japan, MX = Mexico, NE = Netherlands, PO = Poland, RO = Romania, SI = Singapore, So. Af = South Africa, UK = United Kingdom, US =United States

[a] M_{IR} refers to Country Mean Scores on Innovation and Risk-taking. Numbers in parentheses indicate standard deviation

[b] M_{CI} refers to Country Mean Scores on Continuous Improvement. Numbers in parentheses indicate standard deviation.

Table 8

Differences between countries on Rewards & Recognition (indicated with X on the bottom of the diagonal) and Explicit Goals (indicated with ◇ on top of the diagonal)

Countries		M_R[a]	M_E[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	AR	**3.17 (.96)**	**3.48 (.84)**	-																
2	*AU	**3.12 (.90)**	**3.75 (.70)**		-														◇	
3	BR	**3.17 (.90)**	**3.62 (.85)**			-		◇							◇	◇			◇	
4	CA	**3.07 (1.06)**	**3.62 (.87)**				-	◇							◇	◇			◇	
5	CH	**3.46 (1.07)**	**3.95 (.74)**			**X**	**X**	-	◇	◇	◇						◇	◇	◇	◇
6	FR	**2.90 (.92)**	**3.68 (.63)**			**X**		**X**	-	◇					◇	◇			◇	◇
7	IN	**3.25 (.95)**	**3.46 (.89)**					**X**	**X**	-				◇	◇	◇			◇	
8	IT	**3.07 (1.03)**	**3.37 (.93)**								-			◇	◇	◇				
9	JA	**3.76 (.71)**	**3.82 (.77)**						**X**			-								
10	MX	**3.32 (.89)**	**3.83 (.71)**										-							

Table 8 (continued)

Countries		M_R[a]	M_E[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
11	NE	**3.90 (.44)**	**4.01 (.51)**		X	X	X	X	X	X	X			-				◇	◇	◇
12	PO	**2.66 (.90)**	**3.94 (.70)**			X	X	X	X	X	X	X		X	-		◇	◇	◇	◇
13	RO	**3.22 (1.07)**	**3.90 (.77)**					X	X					X	X	-	◇	◇	◇	◇
14	SI	**3.25 (.97)**	**3.52 (.77)**											X	X		-			
15	So. Af	**2.97 (.95)**	**3.44 (.88)**					X				X		X	X			-		
16	UK	**2.78 (.93)**	**3.26 (.83)**			X	X	X		X	X	X		X		X	X		-	◇
17	US	**2.92 (.99)**	**3.56 (.83)**			X		X		X		X		X	X	X			X	-

Note. * AR = Argentina, AU = Australia, BR = Brazil, CA = Canada, CH = China, FR = France, IN = India, IT = Italy, JA = Japan, MX = Mexico, NE = Netherlands, PO = Poland, RO = Romania, SI = Singapore, So. Af = South Africa, UK = United Kingdom, US =United States.

[a] M_R refers to Country Mean Scores on Rewards & Recognition. Numbers in parentheses indicate standard deviation.

[b] M_E refers to Country Mean Scores on Explicit Goals. Numbers in parentheses indicate standard deviation.

Table 9

Differences between countries on Feedback (indicated with X on the bottom of the diagonal)

Countries		M_F[a]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	AR*	**3.18 (1.03)**	-																
2	AU	**3.65 (.74)**		-															
3	BR	**3.25 (.86)**			-														
4	CA	**3.20 (.96)**		**X**		-													
5	CH	**3.65 (.82)**			**X**	**X**	-												
6	FR	**3.42 (.76)**				**X**	**X**	-											
7	IN	**3.23 (.88)**		**X**			**X**	**X**	-										
8	IT	**3.22 (.89)**					**X**			-									
9	JA	**3.63 (.80)**									-								
10	MX	**3.39 (.75)**										-							

Table 9 (continued)

Countries		M_F[a]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
11	NE	**3.85 (.62)**			X	X			X	X			-						
12	PO	**3.58 (.78)**			X	X		X	X	X				-					
13	RO	**3.56 (.86)**			X	X		X	X	X					-				
14	SI	**3.34 (.82)**														-			
15	So. Af	**3.26 (.90)**					X						X	X	X		-		
16	UK	**2.97 (.88)**		X	X	X	X	X	X				X	X	X		X	-	
17	US	**3.15 (.92)**		X			X	X					X	X	X			X	-

Note. * AR = Argentina, AU = Australia, BR = Brazil, CA = Canada, CH = China, FR = France, IN = India, IT = Italy, JA = Japan, MX = Mexico, NE = Netherlands, PO = Poland, RO = Romania, SI = Singapore, So. Af = South Africa, UK = United Kingdom, US =United States.

[a] M_F refers to Country Mean Scores on Feedback. Numbers in parentheses indicate standard deviation.

Table 10

Robust Test of Equality of Means to Test Differences in Organizational Climate Variables at Geo-social Region Level of Analysis

Variables	Name of Test	Test Statistic	*df*1	*df*2
Innovation and Risk-taking	Welch- James	46.92	4	1759.79
	Brown- Forsythe	45.33	4	3263.92
Continuous Improvement	Welch- James	298.16	4	1837.11
	Brown- Forsythe	307.34	4	4756.03
Rewards & Recognition	Welch- James	93.24	4	1764.54
	Brown- Forsythe	101.29	4	4094.20
Explicit Goals	Welch- James	133.06	4	1777.76
	Brown- Forsythe	128.11	4	3234.76
Feedback	Welch- James	154.26	4	1785.86
	Brown- Forsythe	161.61	4	3506.43

Table 11

Significant Differences between Regions on Mean Scores for Innovation and Risk-taking (indicated with X on the bottom of the diagonal) and Continuous Improvement (indicated with ◇ on top of the diagonal)

	Region	IR[a]	CI[b]	1	2	3	4	5
				(*n* = 10,857)	(*n* = 1,825)	(*n* = 1,429)	(*n* = 350)	(*n* =1,137)
1	Anglo Countries*	**3.48 (.73)**	**3.56 (.77)**	-	◇	◇	◇	◇
2	East Asia	**3.63 (.77)**	**3.91 (.75)**	X	-	◇		◇
3	Eastern Europe	**3.70 (.70)**	**4.07 (.60)**	X		-	◇	◇
4	Latin America	**3.53 (.78)**	**4.00 (.55)**			X	-	◇
5	Western Europe	**3.66 (.72)**	**3.69 (.65)**	X				-

Note. * Anglo Countries = USA, Canada, UK, Australia. East Asian Regions = China, Singapore, India, Japan. Eastern Europe = Poland, Romania. Latin America = Mexico, Brazil, Argentina. Western Europe = Netherlands, South Africa, France, Italy.

IR[a] refers to region mean scores on Innovation and Risk-taking. Numbers in parentheses indicate standard deviation.

CI[b] refers to region mean scores on Continuous Improvement. Numbers in parentheses indicate standard deviation.

Table 12

Significant Differences between Regions on Mean Scores for Rewards & Recognition (indicated with X on the bottom of the diagonal) and Explicit Goals (indicated with ◇ on top of the diagonal)

	Region	RR[a]	EG[b]	1	2	3	4	5
				(*n* = 10,857)	(*n* = 1,825)	(*n* = 1,429)	(*n* = 350)	(*n* =1,137)
1	Anglo Countries*	**2.90 (.99)**	**3.49 (.84)**	-	◇	◇	◇	◇
2	East Asia	**3.40 (1.04)**	**3.80 (.81)**	**X**	-	◇	◇	◇
3	Eastern Europe	**3.01 (1.05)**	**3.91 (.74)**	**X**	**X**	-	◇	◇
4	Latin America	**3.18 (.90)**	**3.62 (.84)**	**X**	**X**	**X**	-	
5	Western Europe	**2.95 (.90)**	**3.62 (.78)**		**X**		**X**	-

Note. * Anglo Countries = USA, Canada, UK, Australia. East Asian Regions = China, Singapore, India, Japan. Eastern Europe = Poland, Romania. Latin America = Mexico, Brazil, Argentina. Western Europe = Netherlands, South Africa, France, Italy.

RR[a] refers to region mean scores on Rewards and Recognition. Numbers in parentheses indicate standard deviation.

EG[b] refers to region mean scores on Explicit Goals. Numbers in parentheses indicate standard deviation.

Table 13

Significant Differences between Regions on Feedback (indicated by X on the bottom of diagonal.)

	Region	FD[a]	1	2	3	4	5
			(n = 10,857)	(n = 1,825)	(n = 1,429)	(n = 350)	(n =1,137)
1	Anglo Countries*	**3.13 (.91)**	-				
2	East Asia	**3.52 (.86)**	**X**	-			
3	Eastern Europe	**3.57 (.84)**	**X**		-		
4	Latin America	**3.25 (.86)**		**X**	**X**	-	
5	Western Europe	**3.39 (.80)**	**X**	**X**	**X**		-

Note. * Anglo Countries = USA, Canada, UK, Australia. East Asian Regions = China, Singapore, India, Japan. Eastern Europe = Poland, Romania. Latin America = Mexico, Brazil, Argentina. Western Europe = Netherlands, South Africa, France, Italy.

FD[a] refers to region mean scores on Feedback. Numbers in parentheses indicate standard deviation.

Appendix B: Human Subjects Institutional Review Board Approval

San José State
UNIVERSITY

Office of the Academic Vice President
Academic Vice President Graduate Studies and Research
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San José, CA 95192-0025
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To: Rangapriya Narasimhan
One Washington Square
San Jose, CA 95192-0120

From: Pam Stacks, Pam Stacks
Interim AVP, Graduate Studies & Research

Date: May 6, 2005

The Human Subjects-Institutional Review Board has approved your request for exemption from human subjects review under category "D" in the study entitled:

"Nurturing Intrapreneurship: A Cross-Cultural Analysis of Organizational Climates that foster Intrapreneurship ."

This approval is contingent upon the subjects participating in your research project or the subject's data collected for the research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project and concerning all data that may be collected from the subjects. The Board's approval includes continued monitoring of your research to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must immediately notify Pam Stacks, Ph.D. Injury includes but is not limited to bodily harm, psychological trauma, and release of potentially damaging personal information.

Please also be advised that all subjects need to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate, or withdrawal will not affect any services that the subject is receiving or will receive at the institution in which the research is being conducted. This approval is granted for a one-year period and data collection beyond May 6, 2006 requires an extension request.

If you have any questions, please contact me at (408) 924-2480.

Cc: Dr. Sharon Glazer